

## Claims

### 1. A universal vacuum extension kit comprising:

an extension having an elongated tube with a female connector on one end and a male connector on a second end;

a flexible hose having a female connector on one end and a male connector on a second end;

an elastic adapter in the general shape of a tube having a first end and a second end;

said female connector of said elongated tube and said male connector of said flexible hose are connectable together;

said elastic adapter first end and said female connector of said flexible hose are connectable together;

said elastic adapter second end being deformable and stretchable to fit different size connectors.

### 2. The universal vacuum extension kit as in claim 1 wherein:

said flexible hose female connector has different inside diameters along its length and said flexible hose male connector has different outside diameters along its length, to accommodate different diameter connectors.

said elongated tube female connector has different inside diameters along its length and said elongated tube male connector has different outside diameters along its length, to accommodate different diameter connectors.

3. A universal vacuum extension kit as in claim 1 wherein:

said elongated tube male connector minimum outside diameter is larger than said elongated tube diameter such that the relative cross-sectional area of said elongated tube male connector outside diameter and said elongated tube diameter double the relative velocity of air coming into said elongated tube from a source having a diameter the size of said elongated tube male connector outside diameter;

said elongated tube inside diameter, and said elongated tube male and female connectors, and said flexible hose, and said flexible hose male and female connectors all have an internal flow path when connected that provides an essentially uninterrupted flow path therethrough.

4. A universal vacuum extension kit as in claim 1 including:

a clog preventer having a first open end and a second closed end;

said second closed end having apertures that permit air and small particle passage while filtering out large particles;

said male connectors all have small irregularities placed thereon to ease the force necessary to disconnect them from their corresponding female connectors.

5. A universal vacuum extension kit as in claim 4 including:

an internal recess insert for insertion into said flexible hose female connector for reducing the inside diameter of said flexible hose female connector inside diameter to accommodate smaller male connectors.

6. A universal vacuum extension kit as in claim 7 including:

four said extensions;

a clamshell container formed to removably secure said extensions, said flexible hose, said adapter and said clog preventer for transport and storage;

said clamshell container having a storage compartment on a back side, a cover on a front side, a hook means on a top side and a hinge means on a bottom side.

7. A universal vacuum extension kit as in claim 1 wherein:

said elastic adapter second end is stretchable to fit different outside diameters up to twice the diameter of said elastic adapter inside diameter and is deformable to fit different inside diameter connectors up to 10% smaller than said elastic adapter outside diameter.

8. A universal vacuum extension kit as in claim 7 wherein:

said elastic adapter has a wall thickness of 1/4 inch, plus or minus 1/32 inch, and an inside diameter of from 3/4 to 1 1/4 inch and is 3 1/2 to 5 1/2 inches in length.

9. A universal vacuum extension kits as in claim 7 wherein:

said elastic adapter is provided with centrally located radial ribs that extend inwardly up to 1/8 inch to control insertion and strengthen against collapse.

10. A universal vacuum extension kits as in claim 7 wherein:

said elastic adapter is provided with longitudinal ribs around its circumference that extend along the length of said elastic adapter and protrude outwardly 3/16 inch, plus or minus 1/16 inch, to strengthen against collapse.

11. A universal vacuum extension kit including:

an extension having an elongated tube with a female connector on one end and a male connector on a second end;

a flexible hose having a female connector on one end and a male connector on a second end;

an elastic adapter in the general shape of a tube having a first end and a second end;

said male connector of said elongated tube and said female connector of said flexible hose are connectable together;

said elastic adapter first end and said male connector of said flexible hose are connectable together;

said second end of said elastic adapter being deformable and stretchable to fit different size connectors.

12. A universal vacuum extension kit as in claim 11 wherein:

said flexible hose male connector has different outside diameters along its length and said flexible hose female connector has different inside diameters along its length, to accommodate different diameter connectors.

said elongated tube female connector has different inside diameters along its length and said elongated tube male connector has different outside diameters along its length, to accommodate different diameter connectors.

13. A universal vacuum extension kit as in claim 11 wherein:

said elongated tube male connector minimum outside diameter is larger than said elongated tube diameter such that the relative cross-sectional area of said elongated tube connector outside diameter and said elongated tube diameter double the relative velocity of air coming into said elongated tube from a source having a diameter the size of said elongated tube male connector outside diameter.

said elongated tube inside diameter, and said elongated tube male and female connectors, and said flexible hose, and said flexible hose male and female connectors all have an internal flow path when connected that provides an essentially uninterrupted flow path therethrough.

14. A universal vacuum extension kit as in claim 11 including:

a clog preventer having a first open end and a second closed end;

said second closed end having apertures that permit air and small particle passage while filtering out large particles.

said female connectors all have small irregularities placed thereon to ease the force necessary to disconnect them from corresponding male connectors.

15. A universal vacuum extension kit as in claim 14 including:

an internal recess insert for insertion into said flexible hose female connector for reducing the inside diameter of said flexible hose female connector inside diameter to accommodate smaller male connectors.

16. A universal vacuum extension kit as in claim 14 including:

four said extensions;

a clamshell container formed to removably secure said extensions, said flexible hose, said adapter and said clog preventer for transport and storage;

said clamshell container having a storage compartment on a back side, a cover on a front side, a hook means on a top side and a hinge means on a bottom side.

17. A universal vacuum extension kit as in claim 11 wherein:

said elastic adapter second end is stretchable to fit different outside diameters up to twice the diameter of said elastic adapter inside diameter and is deformable to fit different inside diameter connectors up to 10% smaller than said elastic adapter outside diameter.

18. A universal vacuum extension kit as in claim 17 wherein:

said elastic adapter has a wall thickness of  $1/4$  inch, plus or minus  $1/32$  inch, and an inside diameter of from  $3/4$  to  $1\frac{1}{4}$  inch and is  $3\frac{1}{2}$  to  $5\frac{1}{2}$  inches in length.

19. A universal vacuum extension kit as in claim 17 wherein:

said elastic adapter is provided with centrally located radial ribs that extend inwardly up to  $1/8$  inch to control insertion and strengthen against collapse.

20. A universal vacuum extension kit as in claim 17 wherein:

said elastic adapter is provided with longitudinal ribs around its circumference that extend along the length of said elastic adapter and protrude outwardly  $3/16$  inch, plus or minus  $1/16$  inch, to strengthen against collapse.